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EXAMINER

REDDY, KARUNA P

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1796

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

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Response to Arguments

1. The objection to specification set forth in paragraph 3 of office action mailed 11/24/2009 is withdrawn in view of the reinstatement of original language and designation into Table 2 of specification.
2. Applicant's arguments filed 3/24/2010 have been fully considered but they are not persuasive. Specifically, (A) general thrust of applicant's argument with respect to the cited reference of Kawakami et al is that there is no suggestion in Kawakami et al that copolymers disclosed are capable of functioning as a flowability improver for engineering plastics and there is no teaching that copolymers can be added to engineering plastics; (B) In each example of Fischer et al, the proportion of aromatic vinyl monomer is no more than 20% by weight. Fischer broadly contemplates that copolymer comprises no more than 40% by weight of α,β -unsaturated monomers which includes styrene, while instant claims require at least 50% by weight of an aromatic vinyl monomer; (C) instantly claimed flowability improver for engineering plastics has a phase separation behavior at the time of melt molding with engineering plastics such as a polycarbonate resin (emphasis by applicant) and has compatibility, while success of Fischer et al depends on preventing the phase separation; (D) Fischer et al teach copolymers that have molecular weights no higher than 130,000 (in examples) and one skilled in art would not expect the copolymer of Kawakami et al having a molecular weight of 140,000 (in example 4) to be effectively used to improve melt viscosity of engineering plastics; (E) production examples 1-6 show far superior melt flowability and chemical resistance than do

Art Unit: 1796

comparative compositions and prima facie case of obviousness established over the combined teachings of Fischer and Kawakami et al; (F) no polymer taught in Fischer or Kawakami et al have the instantly claimed molecular weight of 5000 to 100000; (G) resin in Sato is itself a moldable copolymer, has a high degree of polymerization, is moldable and reasonably would have been expected to have a high molecular weight (emphasis by examiner) and Fischer would have suggested that Sato's polymers are unsuitable for use as a flowability improver.

With respect to (A), firstly, the recitation "flowability improver for engineering plastics" is deemed to be a statement of purpose or intended use which is not seen to result in a structural difference between the instantly claimed copolymer and the copolymer of Kawakami et al. Case law holds that "products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. See *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990), MPEP § 2112.01 (II). Finally, Kawakami et al teach that copolymer has improved fluidity and thermal stability in the molten state (abstract). Hence, it is the examiner's position that copolymer, of Kawakami et al, which meets the limitations of instant claims is capable of inherently functioning as a flowability improver for engineering plastics.

With respect to (B), Graham v. Deere analysis was done and the secondary reference of Kawakami et al was brought in to teach the wt% of aromatic vinyl monomer and motivation to increase the wt% of aromatic vinyl monomer was clearly articulated in rejection set forth in paragraph 5 of office action mailed.

Art Unit: 1796

With respect to (C), firstly, applicant's attention is drawn to Fischer et al, which states "compatibility of polymers in blends depends on their degrees of polymerization." (col. 6, lines 48-49) and the copolymers are blended with engineering plastics such as Makrolon (i.e. polycarbonate resin) in example 61. Therefore, it is clear that copolymer of Fischer et al is compatible with polycarbonate resin (an engineering plastic) as in the instant invention. Secondly, there is no teaching in Fischer et al that phase separation occurs at the time of melt molding engineering plastics with copolymer. Hence, it is the examiner's position that phase behavior referred to in the cited reference of Fischer et al is different from the phase separation behavior in instant invention (i.e. phase separation at the time of melt molding).

With respect to (D), applicant's attention is drawn to Fischer et al, wherein it states that the copolymer have a molecular weight of from approximately 30,000 to 250,000 and preferably from 50,000 to 150,000 (col. 6, lines 48-57). Hence, it is the examiner's position that copolymer of Kawakami et al having a molecular weight of 140,000 can be effectively used to improve melt viscosity of engineering plastics.

With respect to (E), comparative examples do not comprise either aromatic vinyl monomer or phenyl methacrylate monomer. Hence, it is the examiner's position that comparison is not with the closest prior art which teaches copolymers comprising both the phenyl methacrylate and aromatic vinyl monomer such as styrene.

With respect to (F), applicant's attention is drawn to Fischer et al, wherein it states that the copolymer have a molecular weight of from approximately 30,000 to 250,000 and preferably from 50,000 to 150,000 (col. 6, lines 48-57). Case law holds that "applicant must look to the whole reference for what it teaches. Applicant cannot merely rely on the examples and argue that the reference did not teach others. *In re Courtright*,

Art Unit: 1796

377 F.2d 647, 153 USPQ 735,739 (CCPA 1967). Further, "nonpreferred disclosures can be used. A nonpreferred portion of a reference disclosure is just as significant as the preferred portion in assessing the patentability of claims." See *In re Nehrenberg*, 280 F.2d 161,126 USPQ 383 (CCPA 1960).

With respect to (G), firstly, applicant's argument that resin of Sato "reasonably would have been expected to have a high molecular weight" is a conclusory statement which is not supported by evidence i.e. attorney's statements are not a substitute for factual evidence. Secondly, Graham v. Deere analysis was done and motivation to prepare copolymer of Sato et al with the instantly claimed molecular weight, based on the teachings in Fischer et al, is clearly articulated in paragraph 7 of office action mailed 11/24/2009.

/K. P. R./
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796